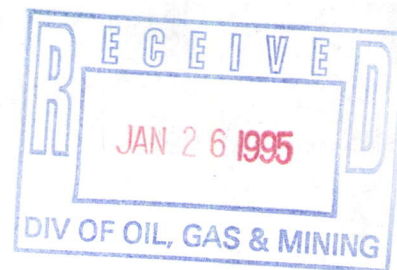


STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
Telephone: (801) 538-5340  
Fax: (801) 359-3940



ANNUAL REPORT OF MINING OPERATIONS

The informational requirements of this form are based on provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, as amended, and the General Rules as promulgated under the Utah Minerals Regulatory Program. An operator conducting mining operations under a Notice of Intention must file an annual operations and progress report (FORM MR-AR) with the Division.

I. General Information

1. Report Time Period: From (mo./yr.) 1/1994 To (mo./yr.) 12/1994
2. DOGM File Number (Mine No): M / 045/003
3. Mine Name: UTAH MARBLEHEAD LIME COMPANY
4. Mineral(s) Mined (or permitted to mine): DOLOMITIC LIMESTONE
5. Type of mine ☒ Surface Mine or ☐ Underground Mine
6. Legal Description (Location of Lands Affected): SEE ATTACHMENT "A"  
1/4, 1/4, Section , Township , Range  
1/4, 1/4, Section , Township , Range  
1/4, 1/4, Section , Township , Range
7. Name of Operator or Company: UTAH MARBLEHEAD LIME COMPANY
8. Permanent Street Address : 390 EAST JOE ORR ROAD, P.O. BOX 488  
City, State, Zip: CHICAGO HEIGHTS, IL 60411  
Phone: 312/468-8846
9. Company Representative (or designated operator):  
Name: MR. EUGENE J. PENMAN  
Title: VICE - PRESIDENT/OPERATIONS  
Business Address: 390 EAST JOE ORR ROAD, P.O. BOX 488  
City, State, Zip: CHICAGO HEIGHTS, IL 60411  
Phone: 312/468-8846

☐ Please check if any of the above information has changed since previous year.

II. Mining and Reclamation

1. Was the mine active during the past year? Yes ☐ No ☒
2. If active, how much ore or mineral was mined? \_\_\_\_\_

3. How much additional acreage was disturbed during the past year? NONE
4. Briefly describe any new or additional surface disturbances that occurred during the past year. This description should include the type of work performed, and volume of material moved.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
5. How much acreage was reclaimed during the past year? NONE
6. Briefly describe the reclamation work performed during the past year. This description should include methods employed, and an evaluation of the results.
- NO RECLAMATION WORK WAS PERFORMED. TEST PLOTS ESTABLISHED TO DETERMINE THE MORE SUITABLE TYPES OF VEGETATION WERE EVALUATED IN AUGUST 1994 BY AN OUTSIDE CONTRACTOR. A COPY OF THIS EVALUATION IS ATTACHED. (SEE ATTACHMENT "B")
7. What is the total disturbed acreage at years end? 49 ACRES
8. Briefly summarize any mining and/or reclamation plans for the upcoming year.
- NO MINING IS ANTICIPATED FOR 1995. SAMPLES FROM PREVIOUSLY INVENTORIED STOCKPILES ARE BEING EVALUATED FOR NEW CHEMICAL GRADE LIMESTONE END USES.
- \_\_\_\_\_
- \_\_\_\_\_

**NOTE:** Section III., "Additional Information" applies only to large mining operations.

### III. Additional Information

1. An updated surface facilities map should be attached if there have been significant changes since the previous map was submitted.
2. Any monitoring results or other reports that are required under the terms of the approved notice of intention should also be attached.

### IV. Signature Requirement

I hereby certify that the foregoing is true and correct.

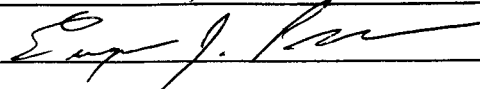
Name (Typed or Print):

EUGENE J. PENMAN

Title of Operator:

VICE-PRESIDENT / OPERATIONS

Signature of Operator:



Date:

1/23/95



ATTACHMENT "A"

## ATTACHMENT "A"



**Marblehead Lime Company**  
A General Dynamics Company

390 East Joe Orr Road  
P.O. Box 488  
Chicago Heights, Illinois 60411  
708/757-6201  
FAX 312/468-8783

Name of Claims		Notice of Location Recorded In--	
UMC		Book	Page
111554	<del>W</del> Betsy #14, <del>S</del> <del>NE</del> <del>SW</del>	32	447
111555	<del>W</del> Betsy #15, <del>N</del> <del>NE</del> <del>SW</del>	32	448
111556	<del>W</del> Betsy #16, <del>S</del> <del>SE</del> <del>NW</del>	32	449
111557	Betsy #17, <del>N</del> <del>SE</del> <del>NW</del>	63	169
111558	Betsy #18, <del>S</del> <del>NE</del> <del>NW</del>	63	170
111559	Betsy #19, <del>N</del> <del>NE</del> <del>NW</del>	63	171
111560	Betsy #20, <del>N</del> <del>SW</del> <del>NE</del>	63	172
285958	Betsy #43, <del>N</del> <del>SE</del> <del>NE</del>	231	881
All Claims in Sec. 22, T.2N, R.9W, S.L.B.M.			
111561	Betsy #22, <del>W</del> <del>SW</del> <del>NW</del>	63	174
111562	Betsy #23, <del>W</del> <del>NW</del> <del>SW</del>	63	175
111563	Betsy #24, <del>E</del> <del>NW</del> <del>SW</del>	63	176
111564	Betsy #25, <del>E</del> <del>SW</del> <del>SW</del>	63	177
All Claims in Sec. 23, T.2N, R.9W, S.L.B.M.			
111565	Betsy #26, <del>E</del> <del>NW</del> <del>NW</del>	63	178
111566	Betsy #27, <del>N</del> <del>NE</del> <del>NW</del>	63	179
Both Claims in Sec. 26, T.2N, R.9W, S.L.B.M.			
111567	Betsy #28, <del>N</del> <del>NE</del> <del>NE</del>	63	180
111568	Betsy #29, <del>N</del> <del>NW</del> <del>NE</del>	63	181
111569	Betsy #30, <del>N</del> <del>NE</del> <del>NW</del>	63	182
111570	Betsy #31, <del>N</del> <del>NW</del> <del>NW</del>	63	183
All Claims in Sec. 5, T.1N, R.8W, S.L.B.M.			
111571	Betsy #32, <del>E</del> <del>NE</del> <del>NE</del>	63	184
Sec. 6, T.1N, R.8W, S.L.B.M.			
111572	Betsy #33, <del>E</del> <del>SE</del> <del>SE</del>	63	185
111573	Betsy #34, <del>E</del> <del>NE</del> <del>SE</del>	63	186
Both Claims in Sec. 31, T.2N, R.9W, S.L.B.M.			
111538	Lakeview #2, <del>W</del> <del>W</del> <del>SE</del>	3	171
111539	Lakeview #3, <del>NE</del>	3	172
Both Claims in Sec. 35, T.2N, R.9W, S.L.B.M.			

Name of Claim	Notice of Location Recorded In --	Book	Page
UMC			
111540	Lakeview #4, SE <del>x</del>	3	173
111541	Lakeview #5, NW <del>x</del>	3	174
	Both Claims in Sec. 26, T.2N, R9.W, S.L.B.M.		
111542	Lakeview #7, SW <del>x</del>	4	166
111543	Lakeview #8, NW <del>x</del>	4	165
111544	Lakeview #9, NE <del>x</del>	4	158
111545	Lakeview #10, SE <del>x</del>	4	159
	All Claims in Sec. 25, T.2N, R.8W, S.L.B.M.		
111546	Lakeview #11, SW <del>x</del>	4	160
111547	Lakeview #12, SE <del>x</del>	4	161
	Both Claims in Sec. 30, T.2N, R.8W, S.L.B.M.		
111548	Lakeview #13, NE <del>x</del>	4	162
	Sec. 31, T.2N, R.8W, S.L.B.M.		
111549	Lakeview #14, NW <del>x</del>	4	163
	Sec. 33, T.2N, R.8W, S.L.B.M.		
111550	Lakeview #15, NW <del>x</del>	4	164
	Sec. 4, T.1N, R.8W, S.L.B.M.		
111551	W <del>x</del> of Betsy #1, N <del>x</del> NE <del>x</del> NE <del>x</del>	32	434
	Sec. 27, T.2N, R.9W, S.L.B.M.		
111552	W <del>x</del> of Betsy #4, S <del>x</del> SE <del>x</del> SE <del>x</del>	32	437
111553	Betsy #13, S <del>x</del> SW <del>x</del> SE <del>x</del>	32	446
	Both Claims in Sec. 22, T.2N, R.9W, S.L.B.M.		
255093	Jeanette #1, E <del>x</del> SE <del>x</del> SE <del>x</del>	203	367
	Sec. 6, T.1N, R.8W, S.L.B.M.		
255094	Jeanette #2, W <del>x</del> SW <del>x</del> SW <del>x</del>	203	368
	Sec. 5, T.1N, R.8W, S.L.B.M.		
255095	Jeanette #3, N <del>x</del> NE <del>x</del> NE <del>x</del>	203	369
	Sec. 7, T.1N, R.8W, S.L.B.M.		
255096	Jeanette #4, N <del>x</del> NW <del>x</del> NW <del>x</del>	203	370
	Sec. 8, T.1N, R.8W, S.L.B.M.		
255302	Jeanette #5, N <del>x</del> NW <del>x</del> NW <del>x</del>	203	496
	Sec. 7, T.1N, R.8W, S.L.B.M.		
255303	Jeanette #6, S <del>x</del> NW <del>x</del> NW <del>x</del>	203	497
	Sec. 7, T.1N, R.8W, S.L.B.M.		
255304	Jeanette #7, W <del>x</del> NE <del>x</del> NW <del>x</del>	203	498
	Sec. 7, T.1N, R.8W, S.L.B.M.		
256506	Jeanette #8, W <del>x</del> SW <del>x</del> SW <del>x</del>	204	234
	Sec. 6, T.1N, R.8W, S.L.B.M.		



## Name of Claim

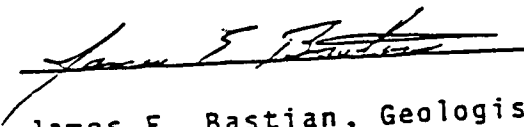
Notice of Location  
Recorded In --

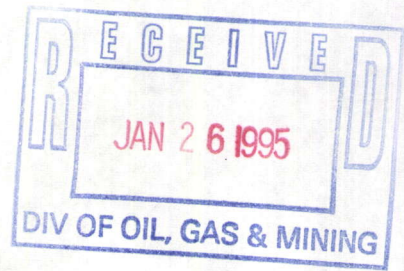
UMC		Book	Page
257116	Jeanette #9, W $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$	205	77
257117	Jeanette #10, N $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$	205	78
	Both Claims in Sec. 7, T.1N, R.8W, S.L.B.M.		
257118	Jeanette #11, E $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$	205	79
257119	Jeanette #12, S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$	205	80
257120	Jeanette #13, S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$	205	81
257121	Jeanette #14, S $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$	205	82
	All Claims in Sec. 5, T.1N, R.8W, S.L.B.M.		
257122	Jeanette #15, N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$	205	83
257123	Jeanette #16, N $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$	205	84
257124	Jeanette #17, N $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$	205	85
257125	Jeanette #18, S $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$	205	86
257126	Jeanette #19, S $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$	205	87
	All Claims in Sec. 8, T.1N, R.8W, S.L.B.M.		
265766	Jeanette #26, E $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$	-	-
265767	Jeanette #27, E $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$	-	-
327789	Jeanette #34, E $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$	293	557
327790	Jeanette #35, W $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$	293	558
327791	Jeanette #36, W $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$	293	559
327792	Jeanette #37, E $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$	293	560
327793	Jeanette #38, W $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$	293	561
327794	Jeanette #39, W $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$	293	562
327795	Jeanette #40, E $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$	293	563
327796	Jeanette #41, W $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$	293	564
327797	Jeanette #42, E $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$	293	565
327798	Jeanette #43, E $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$	293	566
	All Claims in Sec. 8, T.1N, R.8W, S.L.B.M.		

Legal Description Of The Claims Patented By  
Utah Marblehead Lime Company

Patented Claim	No.	Location	
Betsy	1	NE1/4, NE1/4, NE1/4, Sec.27	T2N R9W
Betsy	2	W1/2, NW1/4, NW1/4, Sec.26	T2N R9W
Betsy	3	W1/2 SW1/4, SW1/4, Sec.23	T2N R9W
Betsy	4	SE1/4, SE1/4, SE1/4, Sec.22	T2N R9W
Betsy	5	N1/2, SE1/4, SE1/4, Sec.22	T2N R9W
Betsy	6	S1/2, NE1/4, SE1/4, Sec.22	T2N R9W
Betsy	7	N1/2, NE1/4, SE1/4, Sec.22	T2N R9W
Betsy	8	S1/2, SE1/4, NE1/4, Sec.22	T2N R9W
Betsy	9	S1/2, SW1/4, NE1/4, Sec.22	T2N R9W
Betsy	10	N1/2, NW1/4, SE1/4, Sec.22	T2N R9W
Betsy	11	S1/2, NW1/4, SE1/4, Sec.22	T2N R9W
Betsy	12	N1/2, SW1/4, SE1/4, Sec.22	T2N R9W
Betsy	14	SE1/4, NE1/4, SW1/4, Sec.22	T2N R9W
Betsy	15	NE1/4, NE1/4, SW1/4, Sec.22	T2N R9W
Betsy	16	SE1/4, SE1/4, NW1/4, Sec.22	T2N R9W
Lakeview	1	NW1/4, Sec. 1	T1N R9W
Lakeview	2	E1/2, SE1/4, Sec.35	
		and the E1/2, W1/2, SE1/4, Sec.35	T2N R9W

All claims located North of The Salt Lake Base Meridian in  
Tooele County, Utah

  
James E. Bastian, Geologist  
August 10, 1989



ATTACHMENT "B"



1994 VEGETATION TEST PLOT INVENTORY

Prepared by:

Environmental Industrial Services  
4855 North Spring Glen Road  
Helper, Utah 84526

November 11, 1994

1994 VEGETATION TEST PLOT INVENTORY  
MARBLEHEAD LIME SITE, DELLE, UTAH

Site Description

A 100% inventory of desirable species was conducted on 5 test plots located at the Marblehead Lime Quarry Site.

The actual test plots are at the west end of the quarry below the road and are a simulation of conditions that will exist over the majority of the site upon final reclamation. See Figure 1.

This was the third and final monitoring of the test plot that was implemented in 1989. All data relative to success and methodology should be consistent with prescribed methods for final reclamation and bond liability release.

Methodology

All of the applications are located adjacent to each other and were contour ripped. The contours are still in evidence and were used to maintain a positive reference of the monitors location on each plot.

Four technicians from E.I.S. and Mr. James Bastian from Marblehead Lime walked each contour counting and identifying all desirable species along each furrow. General observations of vigor, percent of cover, and evidence of wildlife are also noted. In addition, a randomly placed 1/100 acre circular plot was established in each test application, cuttings of all desirable species were taken, oven dried and weighed to determine productivity based on desirable forage. The following is the results of the inventory.

Strip Plantings

The following individual species were hand seeded and lightly raked in. Each strip is approximately 2 feet by 8 feet.

Strip #1	Ephraim Crested Wheat (well established individual plants)	24 plants
Strip #2	Fourwing Salt Brush	0 plants
Strip #3	Gooseberry Globemallow	0 plants

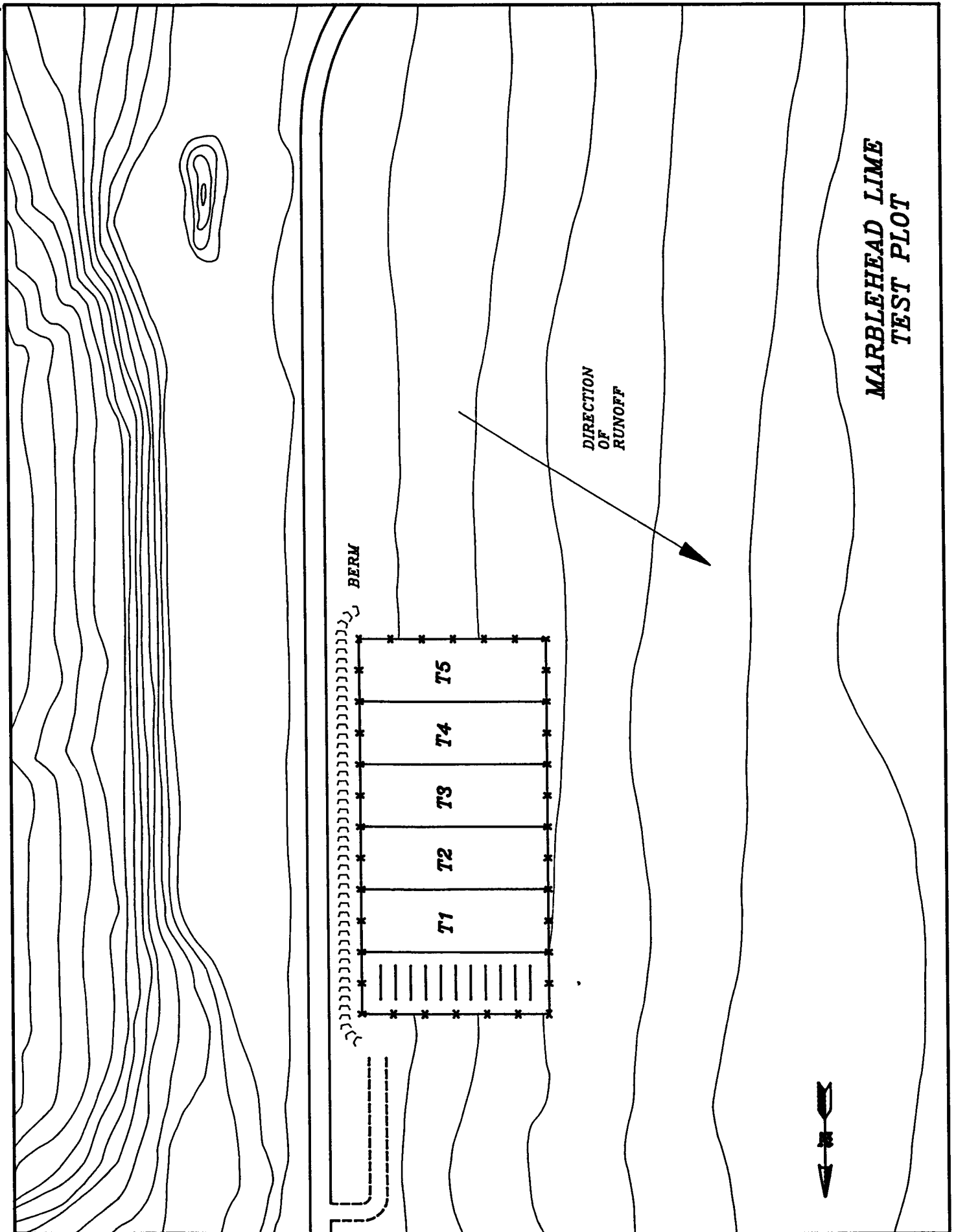


Figure 1

Strip #4	Fairway Crested Wheat	0 plants
Strip #5	Indian Rice Grass	0 plants
Strip #6	Thickspike	0 plants
Strip #7	Bluebunch	0 plants
Strip #8	Yellow Sweet Clover	0 plants
Strip #9	Highcrest Wheat Grass (appear well established and are apparently reseeding.)	23 plants
Strip #10	Galeta	0 plants
Strip #11	Winterfat	0 plants

#### Plot T-1

Application: 40-0-10 Fertilizer  
2000 lbs. per acre wood fiber mulch

Overall impressions of the site is of marginal success relative to total vegetative cover although species diversity appeared to be good with 5 of the desirable species present and evidence of invasion by native species from the adjacent undisturbed area.

The majority of the site was heavily utilized by rodents in evidence by a large number of burrows. Approximately 7% of the total site was occupied by desirable species, Cheat grass, Halogeton and Russian Thistle with Halogeton the dominant species.

<u>Desirable Species Present</u>	<u>Number of Plants</u>
Ephraim Crested Wheat	2
Four-Wing Salt Brush	0
Gooseberry Globemallow	9
Fairway Crested Wheatgrass	0
Indian Rice Grass	3
Thickspike Wheatgrass	0
Bluebunch Wheatgrass	0
Yellow Sweet Clover	0
Highcrest Wheatgrass	2
Galeta	0
Winterfat	15

### Invading Desirable Species

Rabbit Brush

2

**Productivity**  
**Vigor**

**112 lbs. per acre**  
**Good**

### Plot T-2

Application: 10-20-10 Fertilizer oversprayed with  
2000 lbs. per acre wood fiber mulch

Overall impression is this plot was very successful with an excellent potential to reach a satisfactory level of vegetative cover to reach bond release standards within the 10 year bond period.

Approximately 75% of the site is occupied with vegetative cover with undesirables (Thistle, Halogeton and cheat grass) composing approximately one third of this cover.

Plant vigor was good and all species present were producing seed. Seed dispersal is most likely a result of high rodent usage, as evident by the number of harvested seed heads on the ground.

### Desirable Species Present

### Number of Plants

Ephraim Crested Wheat  
Four-Wing Salt Brush  
Gooseberry Globemallow  
Fairway Crested Wheatgrass  
Indian Rice Grass  
Thickspike Wheatgrass  
Bluebunch Wheatgrass  
Yellow Sweet Clover  
Highcrest Wheatgrass  
Galeta  
Winterfat

20  
2  
9  
2  
12  
9  
9  
2  
0  
11  
2

### Invading Desirable Species

Rabbit Brush  
(Cheat grass in evidence)

8

**Productivity**  
**Vigor**

**77 lbs. per acre**  
**Good**



### Plot T-3

Application: 10-20-10 Fertilizer  
No mulch

Overall impression was poor success, plant vigor poor, and less than 60% ground cover with Halogeton making up 75% of this cover. Desirable species is less than 1%.

<u>Desirable Species Present</u>	<u>Number of Plants</u>
Ephraim Crested Wheat	0
Four-Wing Salt Brush	0
Gooseberry Globemallow	2
Fairway Crested Wheatgrass	1
Indian Rice Grass	0
Thickspike Wheatgrass	0
Bluebunch Wheatgrass	0
Yellow Sweet Clover	4
Highcrest Wheatgrass	0
Galeta	0
Winterfat	0
<u>Invading Desirable Species</u>	
Rabbit Brush	2
Productivity	1 lb. per acre
Vigor	Good

### Plot T-4

Application: 40-0-30 Fertilizer  
No mulch

This plot appeared to have the most significant change over the previous monitoring period. The age class of the desirable vegetation appeared to be approximately half of the surrounding plots. Vigor was very good with approximately 50% ground cover. It would appear that either; (1) there was delayed germination on this plot or, (2) seed from surrounding plots had invaded this site.

This apparent abnormality may have resulted from an excessive concentration of nitrogen with the original fertilizer application, allowing germination and establishment after a period of time when conducive to plant establishment. This may have resulted from summer precipitation over the past 2 years breaking a prolonged drought cycle.

Desirable Species PresentNumber of Plants

Ephraim Crested Wheat  
Four-Wing Salt Brush  
Gooseberry Globemallow  
Fairway Crested Wheatgrass  
Indian Rice Grass  
Thickspike Wheatgrass  
Bluebunch Wheatgrass  
Yellow Sweet Clover  
Highcrest Wheatgrass  
Galeta  
Winterfat

0  
1  
7  
1  
8  
1  
0  
0  
2  
3  
0

Unknown (wheatgrass)

3

**Productivity**  
**Vigor**

**23 lbs. per acre**  
**Very good**

Plot T-5

Application: Control - seed only

Ground cover was high with a predominance of Cheat grass and Halogeton. Some Thistle was in evidence comprising 60% vegetative cover.

An interesting phenomenon was a large grouping of Ephraim Crested Wheatgrass with an abundance of seed dispersed on the ground and a multiple of plant sizes indicating annual reseeding. Also, the presence of Rabbit Brush invading the site made up a large percentage of the ground cover.

Desirable Species PresentNumber of Plants

Ephraim Crested Wheat  
Four-Wing Salt Brush  
Gooseberry Globemallow  
Fairway Crested Wheatgrass  
Indian Rice Grass  
Thickspike Wheatgrass  
Bluebunch Wheatgrass  
Yellow Sweet Clover  
Highcrest Wheatgrass  
Galeta  
Winterfat

34  
0  
6  
0  
7  
0  
0  
0  
5  
3  
0

Unknown (Wheatgrass)

10

### Invading Desirable Species

Rabbit Brush	22
Pacific Aster	1

Productivity	109 lbs. per acre
Vigor	Good

### Conclusions

Based on the fifth year monitoring, the prospect of reclamation success appears high with an application of 40-0-10 fertilizer oversprayed with 2000 lbs. per acre wood fiber mulch, however, all plots have succeeded to varying degrees with the control showing a remarkable increase in desired seed species as well as a suitable seed bed for invading native Rabbit Brush.

It appears that the site would have a high probability of success for fall reclamation given even marginally favorable weather conditions.



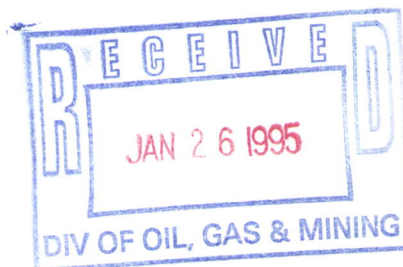
## Marblehead Lime Company

Member of the CALCITHERM GROUP

390 East Joe Orr Road  
Post Office Box 488  
Chicago Heights, Illinois 60411-0488  
708/757-6201  
FAX 312/468-8783

January 23, 1995

Mr. D. Wayne Hedberg - Permit Supervisor  
State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203



RE: ANNUAL REPORT OF MINING OPERATIONS  
PERMIT NUMBER M/045/003

Dear Mr. Hedberg:

Attached, please find our form MR-AR Annual Report of Mining Operations.

During this reporting period no mining activity took place within the boundaries of the Utah Marblehead Lime Quarry. Attachment "A" is the legal descriptions of all our mining claims. For your reference, attachment "B" is a copy of the report evaluating the reclamation test plots that were implemented in October, 1989.

If additional information is required or questions arise, feel free to contact me or my assistant, James E. Bastian, at anytime.

Sincerely,

MARBLEHEAD LIME COMPANY

Eugene J. Penman  
Vice President of Operations

EJP/sem  
Attachments

cc: W.S. Brown (w/Attach.)  
A.F. Miossi (w/Attach.)  
J.E. Bastian (w/Attach.)